2. URBAN-WILDLAND INTERFACE

2.1 Analysis of the Problem

Rural and wildland development has continuously and increasingly impacted wildland fire protection in interface areas. When structures that lack built-in fire protection—such as defensible space—burn, California Department of Forestry and Fire Protection (CDF) fire suppression apparatus and personnel need to be diverted from their primary purpose—natural resource protection—in order to protect structures at risk. The results of this diversion can be more acres burned, higher natural resource losses, and greater fire protection and rehabilitation expenses incurred. Additionally, more homes can be destroyed, and more lives are lost or put at risk.

Historically, the state has taken responsibility for wildland fire protection, while local agencies govern land use planning and development. Partly because of this separation of authority, areas known today as the Urban-Wildland Interface have continued to grow. Such an increase in the number of dwellings intermingled with wildland fuels has created statewide wildfire problems. This increase in the number of dwellings creates an additional level of risk, by concentrating flammable fuels into relatively small areas, depending on the density of developments.

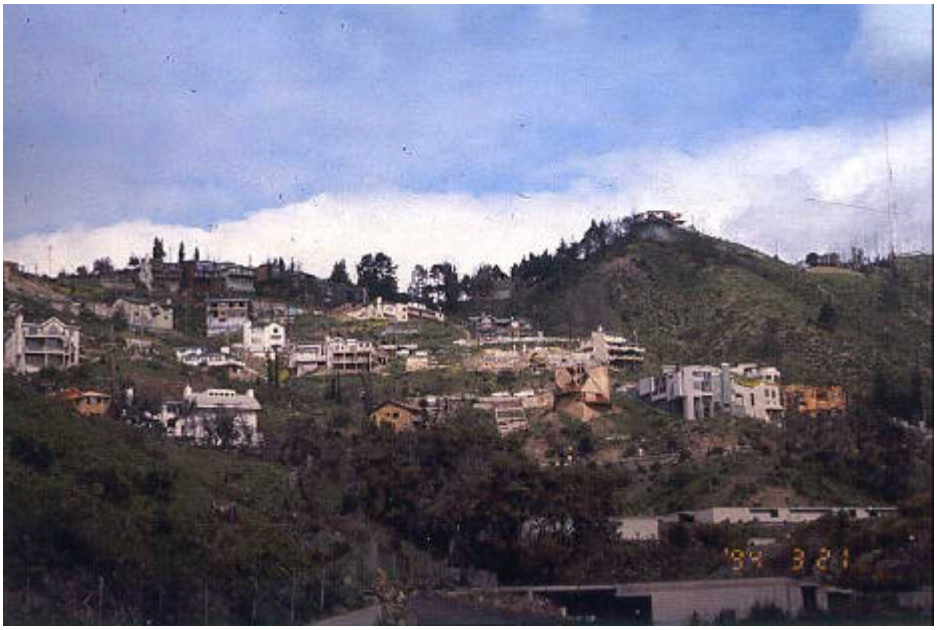

Figure 2.1 – Urban Wildland Interface, Dense Development

2.2 Special Fire Problems

Wildfire is part of California's normal ecological processes, acting as both a benefit and a detriment to our natural resources. When people recreate in and develop mountainous, forest and brush-covered lands, however, wildfires become a threat to public safety, life and property. Combined with California's

Mediterranean climate—wet, warm winters that promote vegetative growth and hot, dry summers that make the growth highly flammable—recreation and development in the Urban-Wildland Interface can be dangerous. These threats are special problems in California that have vexed lawmakers, firefighters, planners and residents for many years. Repeated efforts at state and local levels have shown some benefits, but have far from erased the wildfire problems faced by many Californians. Much has yet to be done to curb the tide of destruction.

Figure 2.2 – Aerial View of Oakland/Berkeley Hills Tunnel Fire (1991)

People's interaction with this disturbance-driven ecosystem has led to decades of disastrous conflagrations. Early in the 20th century, even wildfires that encroached on populated areas did not tend to consume a large number of houses. Since the density of development in these areas has significantly increased over the last few decades, fires that otherwise may have burned out are destroying, and even being fueled by, structures and other elements of development. For example, the most severe individual Urban-Wildland Interface fire yet experienced in California was the Oakland/Berkeley Hills Tunnel Fire in October of 1991. The devastation can be seen and felt in the photograph shown above. The statistics for this fire indicate that over 2,900 structures were damaged or destroyed—most within a few hours—and 25 people perished, including both firefighters and civilians.

Lack of defensible space and fire safe infrastructure such as roads accessible by fire equipment and evacuees, contributed greatly to the losses in this fire. In a situation like this, fire crews can not defend every threatened structure. Sound measures must be taken to protect life and property before fires start. Since not every residence can be protected by firefighters, state and local governments must help the people help themselves. One way to do this is through fire engineering, which provides such benefits as licensing, product evaluation, hazardous materials and pipeline safety, fire safe planning, and collection and analysis of fire-related data for improvement of existing regulations, and for creation of new, performance based codes. Enforcement of such pre-fire zoning and hazard mitigation regulations also contributes to public safety. Another way to help people is through education of the public about the importance of such laws and the options available to help make our homes and our communities more fire safe.